ACC NR: AT6016342

ing and the base. This process results in a plane stressed state which may be assumed as constant with respect to the thickness and area of the coating with sufficient accuracy for practical purposes. It is shown that the tangential internal stresses at the interphase boundary are localized at the edges of the coating at a distance approximately equal to the coating thickness, which agrees with the St. Venant principle. The remainder of the coating shows zero tangential stresses, i. e. is in a plane stressed state. Since each layer making up the coating has a different modulus of elasticity so that stresses are distributed unevenly throughout the cross section with the application of tensile force, the layer with the highest modulus of elasticity will take the greater part of the load and the coating will be destroyed by sections. The oriented layer, as the most rigid, will be destroyed first. Consequently the complexity of the system increases with thickness since each component has a different microstructure. Thus the nonhomogeniety of the structure increases with thickness and the physical and mechanical indices of the coating deteriorate. These facts should be taken into consideration when using polymer coatings for protecting metals from corrosion. Orig. art. has: 2 figures.

SUB CODE: 11, 20/ SUBM DATE: None/ ORIG REF: 009

Card 2/2

SHANDYR', V., gornyy master.

We are thrifty of the nation's pennies. Mast.ugl. 6 no.9:4-5 S '57. (MIRA 10:11)

(Coal mines and mining--Costs)

AUTHOR: Shandyurko, N.M., Engineer SOV/118-58-12-6/17

TITLE: Experience in the Use of Conveyer Transport in the Cherepovets Metallurgical Plant (Opyt ekspluatatsii konveyyernogo transporta na Cherepovetskom metallurgicheskom zavode)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhelykh rabot, 1958, Nr 12, pp 21 - 24 (USSR)

ABSTRACT: The Cherepovetskiy metallurgicheskiy zavod (the Cherepovets Metallurgical Plant) has introduced the USSR's first internal conveyer transportation between the various shops of the plant. The plant operates 200 belt conveyers with a total length of 24 km. The conveyers transport coal, ore concentrates and limestone. The raw material is delivered to the plant by railroad, is unloaded by 3 rotary car dumpers, is subsequently transported by conveyers to the stores, and from there to the various shops by belt conveyers. The author lists a number of deficiencies, and does not evaluate the working efficiency of the transportation system. There are 3 photos.

Card 1/1

SHANDYURKO, N.M., inzh.

Dust removal in blast-furnace shops. Bezop.truda v prom. 3 no.5:15-17 My '59. (MIRA 12:8)
(Dust--Removal)

SHANEK, O.

Anosognosia in psychiatry. Lek. listy 6 no.15:445-449
1 Aug 1951. (CLML 20:11)

1. Of the Psychiatric Clinic of Masaryk University, Brno
(Head -- Prof. Zdenek Lauterer, M.D.).

SILENY, Karel; DVORAK, Frantisek; SHANEL, Jan

Organization of the joinery production in Suchdol nad Luznici.
Drevo 18 no.8:301-305 Ag '63.

1. Jihoceske drevarske zavody, n.p., Ceske Budejovice.

Z/040/63/000/001/002/007
E073/E492

AUTHOR: Shánělec, Josef, Engineer

TITLE: New road system of the Praha-Ruzyně airfield

PERIODICAL: Letecký obzor, no.1, 1963, 7-9

TEXT: In the autumn of 1960, new section of the road system with an apron 3100 m long and a total width of 60 m was built and connected with the existing road system and the new handling area for aircraft. A total length of 8 km of connecting and approach roads (width 22.5 m) was also added. The new apron is approximately in the azimuth 70 to 250°, which is the direction of the prevailing winds. The longitudinal slope is also favorable for landing against the wind and for take-off in both directions; the approach areas are free of any obstacles and are outside built-up areas, thus reducing noise nuisance to a minimum. The new apron could be extended to 4300 m. It is designed to carry the heaviest types of transport aircraft at present in use and also those likely to operate within the next 20 years. Under the top layer of the apron there is a 25 cm thick gravel-sand "airing" layer, to eliminate penetration of surface moisture under the actual carrier part of the runway. The runway proper consists

Card 1/4

New road system ...

of two layers with a 14 cm clay stabilization and a 14 cm concrete stabilization, the purpose of which is to distribute the pressures uniformly. The surfacing consists of a concrete raft 25 to 30 cm thick. The runway is capable of carrying aircraft exerting a load of 45 tons on each undercarriage wheel with a tyre pressure of 12 kg/cm^2, i.e. aircraft of a total weight exceeding 250 tons (the TU-114 weighs about 187 tons). Laying of the new section of the road system which started in the last quarter of 1960 was completed in 25 months. The lighting includes a high luminous intensity approach system with variable light flux permitting landing of aircraft in the direction 25, which extends for 1000 m from the north-eastern edge of the apron; a lighting approach system of medium intensity for landing in the direction 07 extending for 950 m from the south-western edge of the apron; two sets of lights indicating the 45 m wide central part of the runway with a maximum loading capacity; a lighting system in the north-western part of the runway demarcating for 900 m from the origin of the runway, the location of undercarriage contact for the aircraft landing in the direction 25; lights indicating in the

New road system ...

south-western part of the runway for a length of 300 m from the runway origin, the place of contact of aircraft landing in the direction 07, and a number of other illumination systems. Radio-navigation comprises systems for 1) landing in the direction 25, 2) accurate approach radio beacons of Soviet and British systems which indicate to the landing aircraft the landing axis and the plane of approach down to an altitude when visual control is used to complete the landing. This equipment is in the early stage of construction and will cater for landing by instruments in the direction 25; however, it will be possible to extend it for direction 07; 3) accurate Czech-produced approach radar for landing in both directions which, together with the airport traffic radar in the neighborhood of the airport, will form part of important monitoring and control systems. The electric power distribution is by a 6 kV cable system with two large substations located roughly in the centres of the greatest demand areas near the new runway and a further three close to the radio equipment. Altogether over 150 km of cables with over 16 km of low-voltage cables, over 19 km of high-voltage

Z/040/63/000/001/002/007
E073/E492

New road system ...

distribution cables and 46 km of communication cables were laid and over 2000 light fittings installed. The importance of organizing adequate maintenance gangs for the runways and approach roads is emphasized. There are 3 photographs.

Card 4/4

USSR/General Biology - Individual Development. Embryonal Development. B

Abs Jour : Ref Zhur Biol., No 6, 1959, 23610

Author : Shanev, V.D.

Inst : Kalinin State Teachers Institute

Title : An Interesting Case of Monstrosity in Black Grouse.

Orig Pub : Uch. zap. Kalininsk. gos. ped. in-ta, 1956, 20, 295-296

Abstract : No abstract.

Card 1/1

SOV/126-6-1-10/33

AUTHORS: Arkharov, V. I. and Shangareyev, F. L.

TITLE: An X-ray Study of the Recrystallisation of Electrolytic Chromium by the Method of "Thin" Primary Beam (Rentgenograficheskoye issledovaniye rekristallizatsii elektroliticheskogo khroma metodom tonkogo pervichnogo puchka)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 1, pp 82-88 (USSR)

ABSTRACT: Experiments have been carried out in order to increase the accuracy of earlier work on the determination of the temperature at which noticeable recrystallisation of electrolytic chromium deposited under different conditions begins. This has been done by the use of the "thin" primary beam method. In the case of "mat" deposits ($t = 20^{\circ}$; t = temperature of the electrolyte) the recrystallisation temperature was found to be $900^{\circ}C$. For "shining" deposits ($t = 50$) the recrystallisation temperature is considerably lower than the early data indicated, namely, it is now thought to be about $600-660^{\circ}C$ (instead of the early value of 900-1000). In the case of "milky" deposits ($t = 80^{\circ}C$) and deposits obtained at

Card 1/3

An X-ray Study of the Recrystallisation of Electrolytic Chromium by the Method of "Thin" Primary Beam

t = 44°C recrystallisation begins at 800 and 700°C respectively. The dependence of t_{recr} on the current density in the region D_k = 30-50 amp/sq. inch has been investigated. An increase in D_k leads to a decrease in t_{recr} by 50-100°C. The dependence of t_{recr} on t and D_k is correlated with the dependence of the perfection of texture, durability and hardness on these two parameters. The experimental results are interpreted in terms of the theories developed in Refs. 2, 3 and 12. The factor which appears to be decisive is the phase self-hardening which is a result of the change-over from initially hexagonal phase into normally cubic chromium. The experiments were carried out on deposits 30-100 micron thick obtained from electrolytes which consisted of 150 g of CrO_3 and 1.5 g of H_2SO_4 per litre of distilled water.

SOV/126-6-1-10/33

An X-ray Study of the Recrystallisation of Electrolytic Chromium by the Method of "Thin" Primary Beam

There are 3 figures, 3 tables and 13 references, 8 of which are Soviet, 3 German, 2 English.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Metal Physics, Ural Branch of the Ac.Sc., USSR)

SUBMITTED: July 17, 1957

Card 3/3 1. Chromium--Electrodeposition 2. Chromium--Crystallization
3. Chromium--Temperature factors 4. Chromium--X-ray analysis

AUTHORS: Arkharov, V. I. and Shangareyev, F. L. SOV/126-6-1-25/33

TITLE: An Investigation of Recrystallisation of Pure Copper Using a "Thin" Primary X-ray Beam (Issledovaniya rekristallizatsii chistoy medi metodom tonkogo pervichnogo puchka rentgenovskikh luchey)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 1, pp 172-173 (USSR)

ABSTRACT: It is shown in Ref.1 that recrystallisation of electrolytic chromium may be detected using a "thin" X-ray beam even in cases where the "thick" beam method yields a negative result (Ref.2). In the present paper the recrystallisation of copper is investigated. As a result of X-ray studies on 99.99% pure copper it was established that:
1. Recrystallisation begins at lower temperatures than was suggested in previous work (Refs.3-8). With prolonged tempering recrystallisation may begin at temperatures as low as 100°C.
2. The "thin" beam method may be successfully used in the detection of the early stages of recrystallisation.
3. The onset of recrystallisation cannot be connected with

Card 1/2

SOV/126-6-1-25/33

An Investigation of Recrystallisation of Pure Copper Using a "Thin" Primary X-ray Beam

any definite temperature. The temperature at which recrystallisation begins depends on the duration of the tempering process and the method whereby recrystallisation is detected. In particular, in the X-ray method the transverse dimensions of the primary beam should be taken into account.
There are 2 tables and 9 references, 8 of which are Soviet and 1 is a Russian translation from English.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Metal Physics, Ural Branch of the Ac.Sc.USSR)

SUBMITTED: July 17, 1957

Card 2/2

1. Copper--Crystallization 2. Copper--Temperature factors
3. X-rays--Applications

3/[illegible]/027/066/012/018
B124/B203

AUTHORS: Arkharov, V. I., Sokolova, A. A., and Shangareyev, F. L.

TITLE: Chamber for collimated X-raying of polycrystalline flat specimens

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 6, 1961, 751 - 753

TEXT: In the variant of an X-ray chamber (Fig.) developed by the authors, specimen 1 is placed on the object stage 2 and fixed by screw 3. The microsection surface is fixed, and coincides with the vertical front surface of the object stage. The latter can be adjusted vertically and horizontally by two micrometric screws; besides, it can move round the vertical axis together with the frame with the aid of a support in a cylindrical, vertical housing attached to the bench slide. The position with respect to this axis is read from a scale on which zero corresponds to the position of the specimen surface perpendicular to the axis of the collimator 4 which is placed in the casket 5 for taking inverted images. Parallel to the principal optical bench on the base of the chamber.

Card 1/4

S/032/61/027/006/012/018
B124/B203

Chamber for collimated X-raying

there is a second bench 6 over which the slides are moving, which carry the auxiliary stage 7 with two glass prisms 8 with inside total reflection. This stage is moved by the micrometric screw 9. In the back part of the chamber, the microscope 10 is laterally fixed reaching a 15-fold magnification. With the chamber, it is possible to photograph a number of adjacent microsections successively. With the chamber, it is also possible to photograph sufficiently thin specimens in transmitted rays, as well as ground sections with rotation of its surface under an angle to the axis of the primary beam of rays, the angle of swing being read from the rear scale. For this pupose, the semicylindrical casket 11 is screwed to the front side of the frame; the film is placed in this casket. The film is pressed against the casket by the fixing screw 12. Specimens larger than the diameter of the object stage are glued onto the front side of the frame. In collimated X-raying with microbeams of rays, a third bench is placed on the bottom of the chamber, parallel to the chamber axis. To this bench, the slide can be fixed which carries the stand for the collimator of the microbeam of rays. There is 1 figure.

Card 2/4

Chamber for collimated X-raying....

S/032/61/027/006/012/018
B124/B203

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals of the Academy of Sciences USSR)

Card 3/4

RUSAKAV, Sergey Ivanovich; TRUKHAN, Gennadiy Lukich; EPPEL', Sergey Sergeyevich; POPKOV, Vasiliy Ivanovich; VORONIN, G.M., inzh., retsenzent; KARASEV, V.K., dots., retsenzent; ANTIPOVA, A.I., prepod., retsenzent; SHANG'GINA, V.F., kand. tekhn. nauk, retsenzent; MINAYEVA, T.M., red.; SHAPENKOV, T.A., tekhn. red.

[Technology of clothing manufacture] Tekhnologiia shveinogo proizvodstva. Izd.2., perer. i dop. Moskva, Gos. izd-vo "Rostekhizdat, 1961. 670 p. (MIRA 15:2)
(Clothing industry)

POKORYTOV, A.M.; SHAN'GIN, A.M.

How we uncover potentialities. Metallurg 10 no.9:45 S '65. (MIRA 18:9)

1. Alapayevskiy metallurgicheskiy kombinat.

SHAN'GIN, A.N.

Deflectors of the Groznyy Petroleum Research Institute used for turbodrilling. Neft.khoz. 34 no.10:7-12 O '56. (MLRA 9:11)
(Turbodrills) (Oil well drilling)

SHAN'GIN, A. N. Cand Tech Sci -- (diss) "~~Deflection of instruments~~ Deflecting instruments in turbine boring." Baku,1957. 20 pp. (Min of Higher Education USSR. Azerbaydzhan Order of Labor Red Banner Industrial Inst im M. Azizbekov.) ~~100~~ 100 copies. Bibliography: pp 18-19. (10 titles)

(KL, 8-58, 106)

SOV/93-58-8-4/17

11(0)

AUTHOR: Sharigin, A.

TITLE: Possible Build-up of the Angle and Azimuth of Inclination of Wells Drilled by the Turbine Method With the Aid of Deflecting Tools (Vozmozhnyye prirashcheniya ugla i azimuta iskrivleniya skvazhiny pri bureniyi otklonitel'nymi turbinkami turbobura)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 9, pp 18-26 (USSR)

ABSTRACT: The author presents formulas for determining permissible increases in the angle and azimuth of inclination of wells drilled by the turbine method with the aid of deflecting tools. The formula for determining the permissible increase in the angle of inclination of the well is $\Delta\alpha_{Д} \approx 575 \frac{D-d_т}{(g+c)^2}$, where D is the diameter of the bit, $d_т$ - the outside diameter of the turbodrill, g - the length of the turbodrill, and c - the distance between the cutting edge of the bit and turbodrill. The formula for determining the permissible increase in the azimuth of inclination of the well is $\Delta\varphi_{Д} \approx \alpha \cdot \operatorname{ctg} \alpha \times \frac{\sin\omega}{\cos\alpha\cos\omega + \sin\alpha\operatorname{ctg}\Delta\alpha_{Д}}$.

Card 1/2

11(C)

SOV/92-58-8-4/17

Possible Build-up of the Angle (Cont.)

In order to obtain these formulas the author studied the inclination in a curved pipe with a non-guided turbodrill on a bilbof plate (Fig. 1) and in an inclined well (Fig. 2). He determined that the maximum well curvature made by the deflecting unit equals the curvature of a circular arc on which the three supporting points of the deflecting unit rest (Figs. 3, 5). He also determined the increase in the azimuth of inclination of the well in relation to the angle of inclination of the well (Fig. 6). The deflecting tools employed in the study are shown in Fig. 4. The author concludes that forced inclination of the well can be achieved by employing deflecting units whose three supporting points do not rest on the circular arc, and that the size of the deflecting units must be selected from the standpoint of permissible increase in the angle and azimuth of inclination of the well with the aid of the formulas presented in this study. There 6 figures and 6 Soviet references.

Card 2/2

SHAN'GIN, Andrey Nikolayevich; SAVINA, Z.A., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Drilling deflected wells] Burenie napravlenno-iskrivlennykh skvazhin. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 63 p. (MIRA 14:6)
(Oil well drilling)

SHAN'GIN, A.N.

Deflection of wells. Trudy GrozNII no.10:3-11 '61. (MIRA 15:2)
(Oil well drilling)

KACHLISHVILI, M.Z.; BASKAKOV, N.P.; TERENT'YEV, Yu.G.; SHAN'GIN, A.N.

Circulation loss control in the Karabylakskaya-Achaluki area. Neft. khoz. 39 no.6:19-23 Je '61. (MIRA 14:8)
(Chechen-Ingush A.S.S.R.--Oil well drilling fluids)

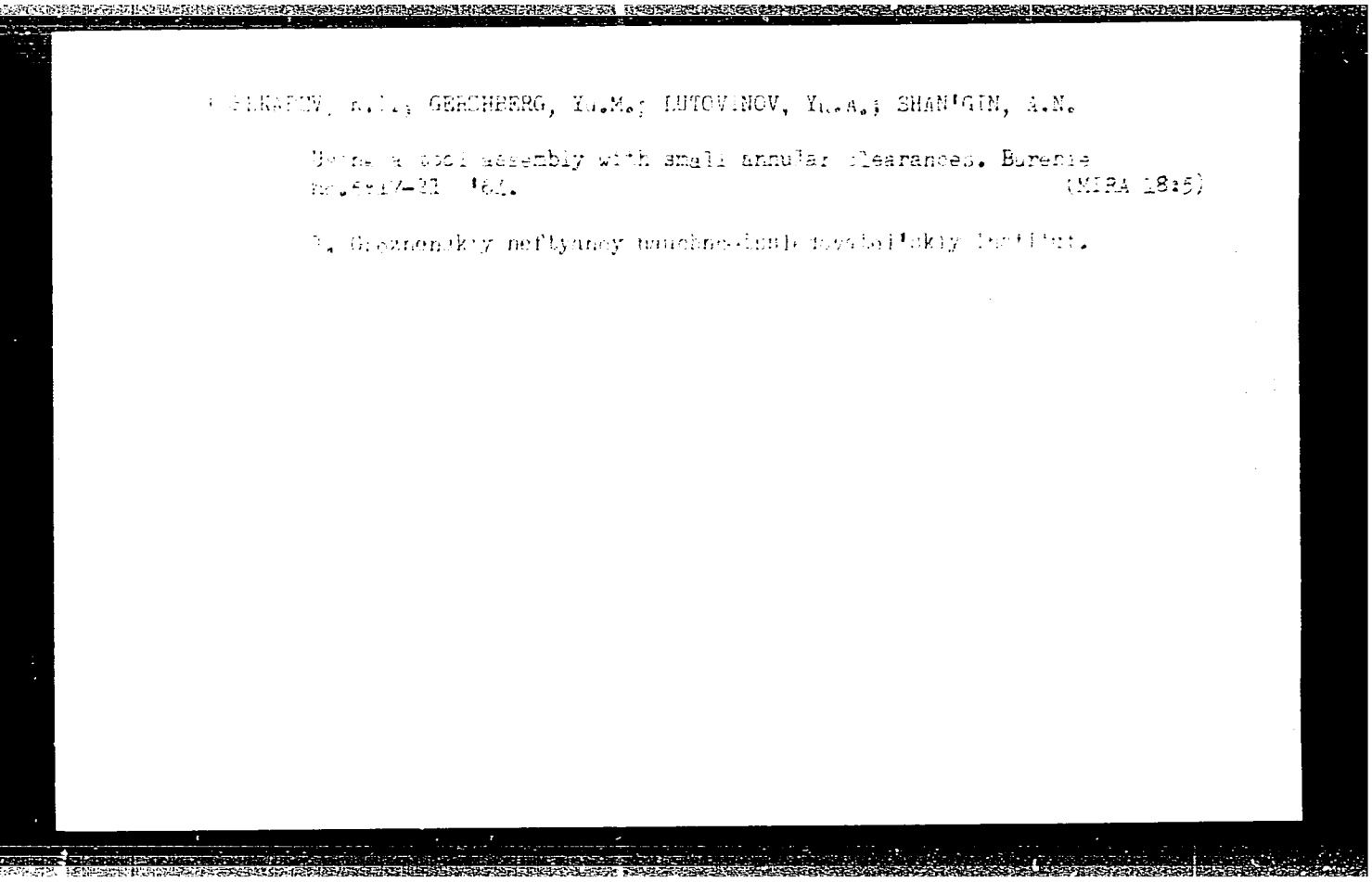
SHAN'GIN, A.N.

Efficient ratio between drilling bit and pipe sizes. Neft. khoz. 39 no.9:24-26 S '61. (MIRA 15:1)
(Boring machinery)

LOSHKAREV, K.I.; GERZHBERG, Yu.M.; SHAN'GIN, A.N.

Preventing hole deviation of wells in the oil fields of the Chechen-Ingush A.S.S.R. Burenie no.1:18-20 '64.
(MIRA 18:5)

1. Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.



[illegible], A.I.; GERSHBERG, Yu.M.; LUTOV'NOV, Yu.A.; SHAN'GIN, A.N.

Burning a tool assembly with small annular clearances. Burenie
no.5:17-20 '64. (MIRA 18:5)

1. Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

L 18474-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k) JD/HM

ACC NR: AR6009960 SOURCE CODE: UR/0137/65/000/012/E036/E036

AUTHOR: Kaz'min, G. S.; Noskov, D. A.; Pankovets, N. G.; Proskurovskiy, D. I.; Sudakov, V. I.; Shangin, A.S.

ORG: none

TITLE: Electron-beam welding of materials in a vacuum

SOURCE: Ref. zh. Metallurgiya, Abs. 12E283

REF SOURCE: Sb. dokl. k Novosib. nauchno-tekhn. konferentsii po mashinostr. Ch. 1. Novosibirsk, 1964, 115-122

TOPIC TAGS: electron beam welding, vacuum welding, metal cutting

TRANSLATION: The authors describe the advantages of the electron-beam method for welding metal over other methods. Units are described for welding, drilling and cutting metals with the use of an electron beam. These installations were developed in the Department of Electronic Devices at the Tomsk Institute of Radioelectronics and Electronic Technology. V. Fomenko [JPRS]

SUB CODE: 13

Card 1/1

UDC: 621.791.72

SHAMGIN, N. I.

Chi., Admin. for Training Nurses & Sanitation, Executive Comm. Red Cross, -1947-.
"Educational Conference for Student Nurses of the Red Cross in Leningrad," Med. Sestra, No. 7, 1947; "Kolkhoz Medical Nurse of a Field Unit," ibid., 1948; "Role of the Medical Nurse in Participation with the Red Cross in the Control of Tuberculosis," ibid., No. 8, 1948; "The Medical Nurse of the Collective Farm in the Field Camp," ibid., No. 5, 1949; "Review of L. G. Lekarev's 'The Rural Doctor's Office,'" Sov. Zdrav., No. 4, 1949; "Review of F. L. Zborovskaya's Book 'Organization of Medical Prophylactic Aid for Children,'" ibid., No. 6, 1949.

USSR/Medicine - Nurses and Nursing Jul 1947
Medicine - Red Cross

"Educational Conference for Student Nurses of the Red Cross in Leningrad," N. I. Shangin, Chief of Administration for Training of Nurses and Sanitation, Executive Committee of the Red Cross, 1 p

"Meditsinskaya Sestra" No 7

Leningrad Municipal Committee for the Red Cross was the first to start this seminar for the instruction of Student Nurses. Courses in the Petrograd, Kalinin, Smol'nensk, Dzerzhin, and Vyborg regions are based on the Leningrad plan. Subjects covered range from ethics of nursing to typhoid fever and care of typhoid fever cases.

16757

SHAKIN, N. I.

"Zinoviy Petrovich Solov'yev," No. 2, 1949;

SHANGIN, N. I. Cand. Med. Sci.

Dissertation: "Collective Farm Aid Stations Attended by Nurses.

12/6/50
Moscow Medical Inst., Ministry of Health RSFSR

SO Vecheryaya Moskva
Sum 71

SHANGIN, N. I.

Vital statistics on the morbidity of the rural population. Sovet. zdravookhr. No. 6, Nov.-Dec. 50. p. 30-4

1. Of Moscow Oblast Scientific-Research Clinical Institute.

CLML 20, 3, March 1951

SHANGIN, N. I.

The Soviet Red Cross. Fel'dsher & Akush. No. 12, Dec. 50. p. 32-5

CLML 20, 3, March 1951

SHAMSIN, N. I.

"Medical Aid Stations Attended by Nurses on Collective Farms." Sub 12 Feb 51, First Moscow Order of Lenin Medical Inst.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

SHANGIN, N.I.; POPOV, B.V.

Organization and method of work of regional sanitary inspectors.
Fel'dsher & akush. no.4:40-45 Apr 1953. (CLML 24:4)

1. Candidate Medical Sciences for Shangin. 2. Moscow.

SHANGIN, N.I.

[Problems in rural public health; how to protect the health of collective farm workers] Voprosy okhrany zdorov'ia sel'skogo naseleniia; kak sokhranit' zdorov'e kolkhozniku. Moskva, Medgiz, 1954. 102p. (Public health, Rural) (MIRA 8:7)

FD-1543

USSR/Medicine - Literature

Card 1/2 : Pub 102-14/14

Author : Timko. I. M. (reviewer)

Title : "Review of the book, "Methods of teaching a course in public health organization and medical education" by N. I. Shangin.

Periodical : Sov. zdrav., 6, 59-61, Nov-Dec 1954

Abstract : This textbook represents an important contribution to teaching the principles of development of Soviet health system in the 4-year schools for feldshers. The author attempts to bridge the gap between theory and practice, which is important in the training of feldshers who will be eventually assigned to independent duty after graduation. The poorest part of the book is its attempt to explain reorganization of sanitary-epidemic control service in the USSR without explaining what that service consists of. The reviewer states that defects pointed out by him must be eliminated in the subsequent editions of the textbook. "Metodika prepodavaniya

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001548310010-8"

Card 2/2

kursa: Organizatsiya zdravookhraneniya i sanitarnogo prosveshcheniya", published Moscow, 1954 by Medgiz.

Institution :

Submitted :

SHANGIN, N.I.; AKIMOVA, N.I.

Hygienic education of the workers and foremen in steel mills. Gig. i san. no.11:37-39 N '54. (MLRA 7:12)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo instituta sanitarnogo prosveshcheniya.
(INDUSTRIAL HYGIENE
hyg. educ. of workers & supervisors in metallurgic indust.)

SHANGIN, N.I., kandidat meditsinskikh nauk; VOLCHANSKAYA, N.P., kandidat meditsinskikh nauk

Health propaganda in districts where virgin and idle lands are being reclaimed. Med.sestra no.5:8-10 My '55. (MLRA 8:6)

(PUBLIC HEALTH,
in Russia, med. propaganda in new rural settlements)
(RURAL CONDITIONS,
in Russia, med. propaganda in new rural settlements)

SHANGIN, Nikifor Ivanovich, kandidat meditsinskikh nauk; KHEYFETS, L.Z., redaktor; BEL'CHIKOVA, Yu.S., tekhnicheskiy redaktor

[Work hygiene for machine-tractor station employees] Gigiena truda rabochikh MTS. Izd 2-e, ispr. i dop. Moskva, Gos. izd-vo med. lit-ry, 1956. 44 p. (MIRA 9:10)

(MACHINE-TRACTOR STATIONS--HYGIENIC ASPECTS)

SHANGIN, N.I. (Moskva)

Fifth anniversary of the organization of the council of sanitary feldshers. Fel'd. i akush. 21 no.9:63 S '56. (MLRA 9:10)
(NURSES AND NURSING)

SHANGIN, M.I., kandidat meditsinskikh nauk (Moskva)

How to set up a plan for health education work in feldsher-midwife station. Fel'd. i akush. 21 no.11:47-52 N '56. (MLRA 9:12)
(HEALTH EDUCATION)

SEANGIN, N.I., kandidat meditsinskikh nauk

Organization and methods of teaching hygiene to workers of food factories and public eating places. Gig. i san., 22 no.8:54-56 Ag '57. (MIRA 10:9)

1. Iz Instituta sanitarnogo prosveshcheniya Ministerstva zdravookhraneniya SSSR.

(RESTAURANTS,
hygienic educ. of personnel handling food)
(INDUSTRIAL HYGIENE
train. of personnel handling food in food factories & restaurants)

SHANGIN, N.I., MIROVALEVA, Z.G. (Omsk)

Assistance of the Omsk Medical Institute to Local public health physicians. Zdrav. Ros. Feder. 2 no.8:36-38 Ag '58 (MIRA 11:9)
(OMSK PROVINCE--PUBLIC HEALTH)

SHANGIN, N.I. (Omsk)

A real current necessity. Sov.zdrav. 17 no.8:33-35 Ag '58 (MIRA 11:9)

(PUBLIC HEALTH, educ.
soc.hyg. as separate discipline (Rus))

MIROVALEVA, Z.G., dotsent; SHANGIN, N.I.; LEGEN'KIY, I.G., assistent; SLOBODENYUK, N.I.

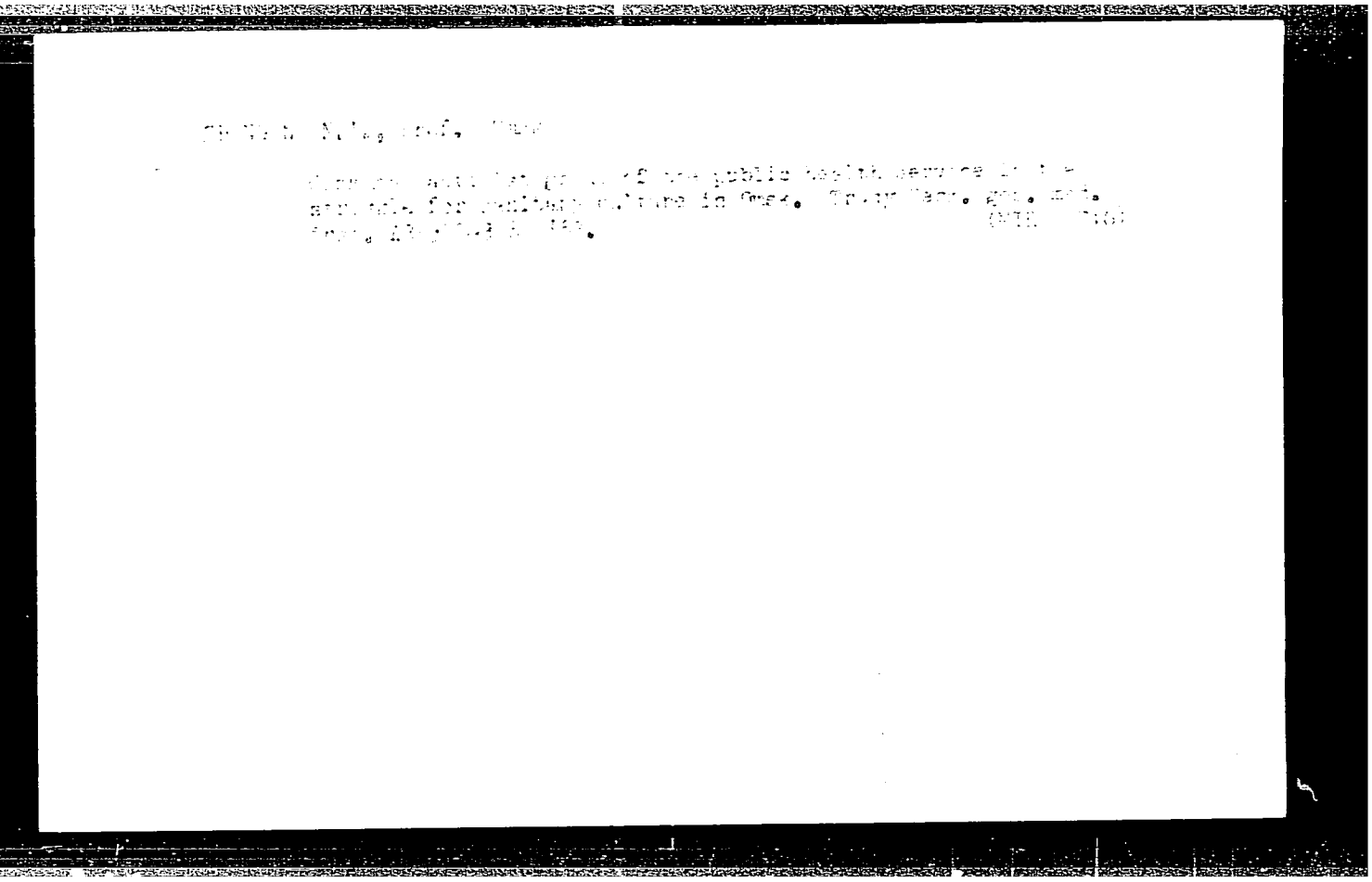
Public health of the Province and City of Omsk on the 40th anniversary of Soviet power. Trudy OMI no.25:23-48 '59. (MIRA 14:10)

1. Iz kafedry organizatsii zdravookhraneniya Omskogo meditsinskogo instituta imeni Kalinina, zav. kafedroy dotsent Z.G.Mirovaleva.
(OMSK PROVINCE--PUBLIC HEALTH)

SHANGIN, N.I.; MIL'SHTEYN, B.L. (Omsk)

Omsk, a garden city. Fel'd. i akush. 26 no.8:41-46 Ag '61.
(MIRA 14:10)

(OMSK--CIVIC IMPROVEMENT)



SHAGIN, N.I., prof. (Omsk); LAGENKIY, I.G., dotsent (Omsk)

Forty years of aid rendered to the public health agencies of Omsk Province. Trudy Perm. gos. med. inst. 43:31-37 '63.
(MIRA 17:6)

SHANGIN, N. M., ALEKSEYEV, F. A., GOLBEK, G. R., SEYFER, V. N., VASILYEVA, N. A., MAYDEBOR, V. N., SOKOLOVSKIY, O. V. (USSR)

"Tritium in Underground Water Studies."

report presented at the Conference on Radioisotopes in Metallurgy and Solid State Physics, IAEA, Copenhagen, 6-17 Sept 1960.

Sov/93-58-4-10/19

AUTHOR: Izyumova, A.M. and Shan'gin, N.N.

TITLE: Sand Movement in a Horizontal Fracture Produced in a Hydraulically Fractured Formation (Dvizheniye peska v gorizontal'noy treshchine, obrazovavsheysya pri gidrorazryve plasta)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 4, pp 44-50 (USSR)

ABSTRACT: This article presents experimental data on the sand movement in a horizontal fracture of a hydraulically fractured formation. The experiments were carried out on a special model at the GrozNII Institute. The purpose of the experiments was to determine the effect of fracturing fluid consumption, sand content of the fracturing fluid, and viscosity of the fracturing fluid on the sand distribution in a horizontal fracture. Fig. 1 shows the sand distribution in a horizontal fracture at different rates of fracturing fluid injection, and Table 1 reflects the increase in the fracture's sand content after injection has been discontinued. Table 2 shows that the sand content of the fracture increases with continuous injection of fracturing fluid of higher sand concentration. Table 3 shows the sand distribution in the fracture after increasing the injection rate and viscosity of the fracturing fluid. Fig. 2 shows the change in the relative permeability of the fracture under various experimental conditions. Fig. 3 shows the effect of flushing on the sand distribution in the fracture. Fig. 4 shows the variation in the relative permeability of the fracture on injection of fluid without sand content. Fig. 5

Card 1/2

shows the change in the fracture's sand content in relation to the applied volume of flushing fluid. The authors conclude that: 1) the sand filling up the horizontal fracture distributes itself in the form of a shoal where the sand lies as a tightly packed layer and in the form of channels where the sand lies in separate grains 2) the relationship between the shoal and channel areas is determined by the injection rate of the sand slurry, i.e., the greater the consumption, the larger the area occupied by the channels, and the smaller the area of the shoals, 3) the degree of sand accumulation in the channels is determined by the sand content of the fracturing fluid, i.e., the higher the content, the more sand in the channels, 4) the application of flushing fluid following the sand injection results in washing the sand out of the channels and, consequently, in greater permeability of the fracture, 5) the flushing fluid must be used to an optimum limit and when this limit is exceeded the sand shifting in the fracture is discontinued, 6) the sand distribution in the fracture following flushing is determined by the fracturing fluid consumption and does not depend on the sand content of the fluid, and 7) viscous fracturing fluid injected at low injection rates results in the same sand distribution as the application of low viscosity fluid at high injection rates. There are 5 figures and 3 tables.

Card 2/2 1. Petroleum--Production 2. Wells--Processing 3. Fluids--Injection 4. Sand--Properties

14(5) SOV/93-58-12-8/16

AUTHOR: Shan'gin, N.N. and Izyumova, A.M.

TITLE: Sand Movement and Distribution in Vertical Fractures (Dvizheniye i razmeshcheniye peska v vertikal'noy treshchine)

PERIODICAL: Neftyanoye khozyaystvo, 1958, Nr 12, pp 36-40 (USSR)

ABSTRACT: The movement and distribution of sand in horizontal fractures was described in an earlier article [Ref 1]. The present article presents experimental data on the movement and distribution of sand in a vertical fracture. The esperiments were performed by the GrozNII Institute with the aid of a model (Fig 1) and the results are shown in Figs 2-4 and Table 1. They concluded that the sand movement and distribution in a vertical fracture is determined by the filtrability and viscosity of the sand transporting fluid and by the consumption of the fluid-sand mixture, that the sand distribution is more efficient when the volume of flushing fluid following the sand injection is equal to the volume of the fluid-sand mixture, and that the sand transporting fluid must be of such viscosity as to permit complete consolidation of the sand at the bottom of the fracture during the sand injection period. There are 4 figures, 1 table, and 1 Soviet reference.

Card 1/1

SHAN'GIN, N.N.; IZYUMOVA, A.M.

Reservoir water exclusion through the use of cement plugs.
Azerb. neft. khoz. 38 no.2:35-37 F '59. (MIRA 12:5)
(Oil well cementing)

[illegible], V. V.

"Study of the Damping of Seismic Waves in Rocks." Cand Phys-Math Sci, Leningrad State U, Leningrad, 1953. (ZhFiz, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

SHAN'GIN, N. V.

"On the Problem of Seismic Wave Attenuation," (U) - an article in Scientific Notes of the Leningrad Order of Lenin State University imeni A. A. Zhdanov, No. 210, Physics Institute, Physical Science Series, No. 9, Geophysics, 1956, 190 pp.

SUM: 1360

SHAN'GIN, N.V.

Damping of seismic waves. Uch.zap.Len.un. no.210:168-190 '56.
(MLRA 9:8)

(Seismology)

69817
SOV/169-59-2-1205

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 2, p 26 (USSR)

7.8000

AUTHOR: Shan'gin, N.V.

TITLE: An Experience of Utilization of the Phenomenon of Attenuation of the Seismic Waves

PERIODICAL: Uch. zap. LGU, 1958, Nr 249, pp 261 - 277

ABSTRACT: It is very difficult to carry out an exact differentiation of waves according to the hodographs, in the case of seismic investigations of small depths or under complicated geological conditions. In these cases it is necessary to make use of the phenomenon of attenuation of seismic waves to increase the accuracy of the seismic investigations. The character of diminution of the amplitude is expressed for an isotropic, homogeneous, and unbounded medium by the formula:

$$A = c/r\, e^{-1/2kr},$$

where c is a constant quantity depending on the force of explosion, r is the distance from the focus to the receiver, k is the attenuation factor of the elasticity energy, which is characterized by the relative variation of the wave amplitude with the distance, and is different for

Card 1/3

An Experience of Utilization of the Phenomenon of Attenuation of the Seismic Waves

the various rocks. Therefore, the differentiation of the waves can be carried out using the differences in the values of k. Two cases of the utilization of the phenomenon of attenuation for seismic investigations to small depths are cited. In the first case, the k-value is determined and the accuracy of its determination was calculated. The observations were carried out along a profile of 200 m in length. Elastic vibrations were caused by an impact of a load (80 kg). The following devices were applied: SP-8 geophone (natural frequency 5 cps), wide-band amplifiers and an SR-7 oscillograph. The number of channels amounted to 6. The maximum voltage-amplification factor was of the order of 10,000. The velocity of tape feed was about 1.5 m/sec. The graduation of the circuits for the different positions of the selector switch "amplifier" was carried out by means of a potentiometer. The greatest error in the sensitivity of the circuits was observed for small amplifications. It was ascertained that the accuracy in determination of the coefficient k is considerably higher than the accuracy in measuring the relative amplitude A_1. In an other case, the possibilities were studied of detecting the zones of strong destruction of the rocky base. The investigations were carried out with the same apparatus and by the same

Card 2/3

An Experience of Utilization of the Phenomenon of Attenuation of the Seismic Waves

method. Together with the hodographs, graphs of the coefficient k were plotted. The studies were carried out over an area geologically known. The comparison of the results of processing the materials (graphs, profiles, hodographs are presented) shows that the utilization of the attenuation phenomenon permits the more exact solution of the problem in question.

V.Yu. Yungans

SHAN'GIN, N.V.

Apparatus for model studies of seismic processes. Uch. zap. LGU no.278:235-238 '59. (MIRA 13:2)
(Seismometers)

SHAN'GIN, N.V.

Seismic station for engineering geological investigations.
Uch. zap. LGU no.278:239-247 '59. (MIRA 13:2)
(Prospecting--Geophysical methods)

SHAN'GIN, N.V.; VILENSKAYA, S.M.

Studying the elastic properties and velocities of seismic waves in the depths of the earth by borehole cores. Uch. zap. LGU no.286:275-283 '60. (MIRA 14:3)
(Seismic prospecting)

SHAN'GIN, N.V.; VORONKOV, O.K.; YUDBOROVSKIY, I.Kh.

Change in the elasticity modulus of rocks with depth and their relation to geological factors. Uch.zap.LGU no.303:146-157 '62. (MIRA 15:11)

(Rocks—Testing) (Seismic prospecting)

SHAN'GIN, N.V.; SHIFRIN, V.Ya.

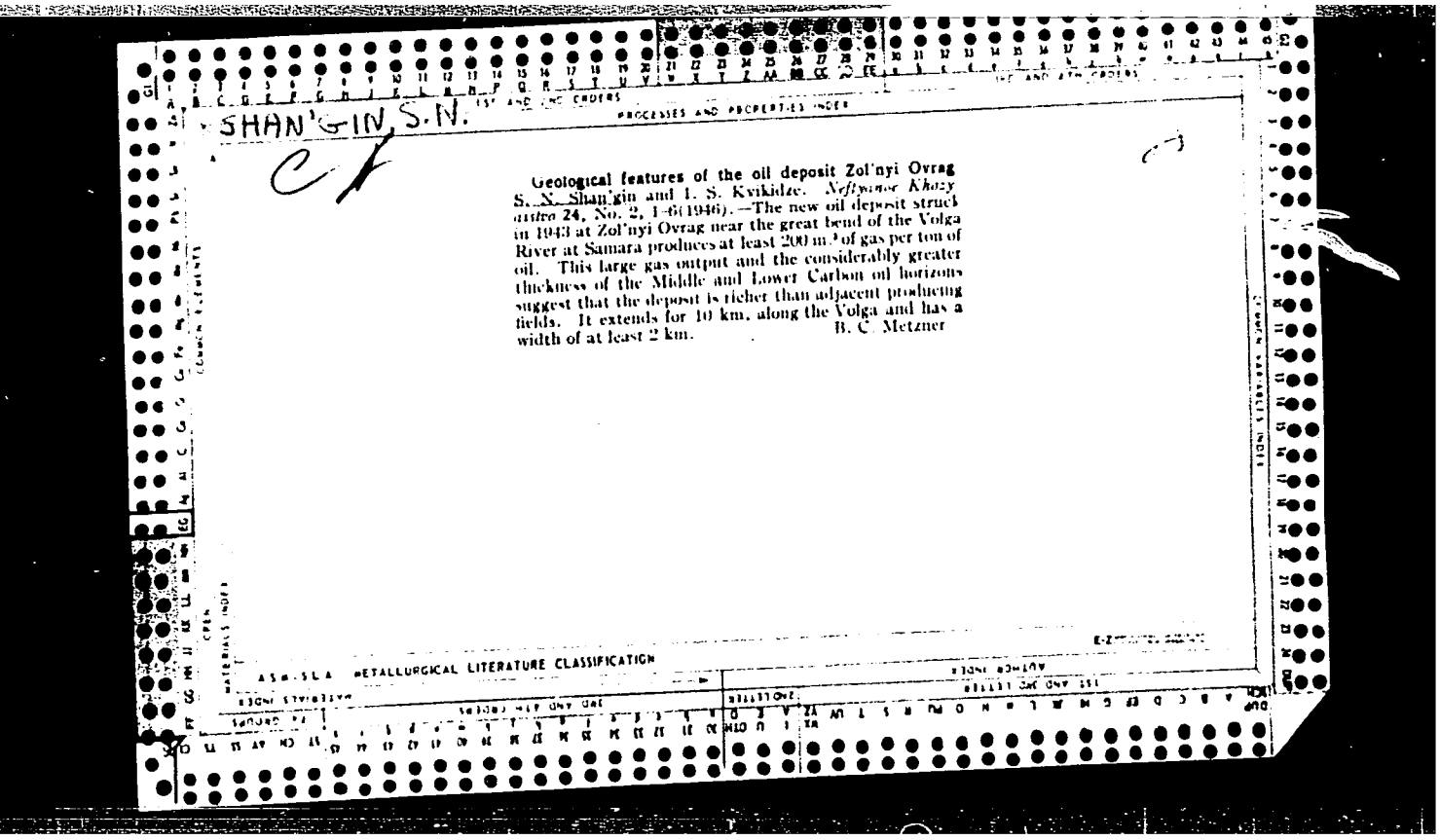
Relation between the speed of a linear wave and porosity and its use in ultrasonic seismic logging of boreholes. Uch.zap.LGU no.303:158-166 '62. (MIRA 15:11)
(Seismic prospecting) (Porosity)

SHAM'SIN, N.V., [illegible]

Effect of the fissure state of a medium on the velocity and amplitude of a seismic wave (three-dimensional model). Uch. zap. IGU no.324:136-140 '64. (MIRA 18:7)

SHAN'GIN, N.V.

Effect of moisture and pressure on changes in the wave velocities and elasticity moduli of sand. Uch. zap. LGU no.324:121-135 '64. (MIRA 18:4)



SHAN'GIN, S.N.

Geological features of the oil deposit Zol'nyi Ovrag. S. N. Shan'gin and I. S. Kvikidze. *Neftyanoe Khozyaistvo* 24, No. 2, 1-6(1946).—The new oil deposit struck in 1943 at Zol'nyi Ovrag near the great bend of the Volga River at Samara produces at least 200 m.³ of gas per ton of oil. This large gas output and the considerably greater thickness of the Middle and Lower Carbon oil horizons suggest that the deposit is richer than adjacent producing fields. It extends for 10 km. along the Volga and has a width of at least 2 km.

B. C. Metzner

SHAN'GIN, S. N.

PA 51T90

USSR/Petroleum Industry
Petroleum - Prospecting

Jan 1948

"Some Regularities in the Stratification of Industrial Petroleum Layers of the Samarskoy Luka Oil Fields," S. N. Shan'gin, 5½ pp

"Neft Khozyay" No 1

Discusses data collected by various survey expeditions to the Samarskoy Luka oil fields, and thereby explains some of the regularities noticed in the oil-bearing layers of this oil field. In 1946 Zadov, Lobov, and Shabanov published oil chart of this region on which they had recorded data compiled during last 10 years.

51T90

LC

SHAN'GIN, S. N. PA 64T77

USSR/Petroleum Industry Apr 1948
Geological Prospecting

"Some Features of Similarity and Difference of the Devonian Petroleum Deposits of the Tuymazov and Yablonov Ravines," S. N. Shan'gin, 2 pp

"Neft Khoz" No 4

Both have similar increases in the productivity of the oil sands, also many similarities in hydrogeological characteristics. Tuymazov Devonian layers show much greater sand pressure than the Yablonov sands. In the Yablonov region it is possible to obtain oil by the gusher method, if care is taken to control the escaping gas and water.

LC 64T77

15-5[illegible]

Translation from: Referativnyy zhurnal, Geologiya, 1957, [illegible], p 180 (USSR)

AUTHOR: Shan'gin, S. N.

TITLE: ~~Hydrological~~ Characteristics of Some Paleozoic Absorption Levels in the Southeastern Tatar and Western Bashkir Republics (Gidrogeologicheskaya kharakteristika nekotorykh pogloshchayushchikh gorizontov paleozoya yugo-vostochnoy Tatarii i Zapadnoy Bashkirii)

PERIODICAL: Tr. Vses. neftegaz. n.-i. in-ta, 1956, Nr 9, pp 29-40

ABSTRACT: The author recommends use of the saccharoidal karst dolomites of the Serpukhov substage of the Lower Carboniferous as an absorption level for disposing of industrial waters in the petroleum industries of Romashkin, Bavly, and Tuymazy in the southeastern Tatar and Western Bashkir Republics. The carbonate

Card 1/2

Hydrological Characteristics of Some Paleozoic Absorption (Cont.)

rocks of the Famennian stage of the Upper Devonian are also characterized by karst features. However, they may be used for this purpose only in wells capable of rapid absorption of the liquid through this level.

Card 2/2

N. A. Yeremin

SHAN'GIN, S.N.

Genetic basis for classifying oil and gas pools. Neft.khoz. 34 no.2:43-46 F '56. (MLRA 9:5)
(Petroleum geology) (Gas, Natural--Geology)

AGADZHANOV, Artem Minayevich [deceased]; MAKSIMOV, Mikhail Ivanovich; KHEL'KVIST, G.A., doktor geol.-mineral.nauk, prof., retsenzent; SHAN'GIN, S.N., doktor geol.-mineral.nauk, prof., retsenzent; BRKMAN, Yu.K., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Oil-field geology] Nefte-promyslovaia geologiia. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 413 p. (Petroleum geology) (MIRA 11:2)

SHAN'GIN, S.N.; ONOPRIYENKO, V.P.; KLYAROVSKIY, G.V.

Preparing oil reserves for exploitation. Geol. nefti 2 no.6:62-65 Je '58. (MIRA 11:7)

(Petroleum geology)

SHAN'GIN, S.N.

Hydrogeological investigations in oil-field development. Geol. nefti 2 no.11:30-33 N '58. (MIRA 11:12)

1.Tatarskiy nauchno-issledovatel'skiy neftyanoy institut.
(Saratov Province--Oil field brines)

SHAN'GIN, S.N.

Regarding the articles on petroleum recovery. Geol. nefti i gaza 4 no.2:45-48 F '60. (MIRA 13:10)

1. Tatarskiy nauchno-issledovatel'skiy neftyanoy institut.
(Oil reservoir engineering)

SHANGIN, V.; LAUKART, I.; GAVRIKOV, I., mashinist traktornogo krana

Increase the production of preheaters. Stroi. truboprov. 10 no.1: 35 Ja '65. (MIRA 18:4)

1. Stroitel'no-montazhnoye upravleniye No.5 tresta Nefteprovodmontazh, Krasnoyarsk. 2. Glavnyy mekhanik Stroitel'no-montazhnogo upravleniya No.5 tresta Nefteprovodmontazh, Krasnoyarsk (for Shangin). 3. Proizvoditel' rabot Stroitel'no-montazhnogo upravleniya No.5 tresta Nefteprovodmontazh, Krasnoyarsk (for Laukart).

AUTHOR: Shangin, V.A. (Engineer) 100-4-8/16

TITLE: Drilling machine. (Burovoy stanok).

PERIODICAL: "Mekhanizatsiya Stroitel'stva" (Mechanisation of Construction), 1957, Vol.14, No.4, pp.22-23 (USSR).

ABSTRACT: The described light drilling machine was constructed by Ryabkon', an engineer of the Evpatoriysk Raypromkombinat, to mechanise the drilling of blast holes. The machine drills holes of 30-40 mm dia, 1200 to 2000 mm deep. The speed of rotation is 450-600 r/min, time necessary to drill to a depth of 1000 mm is 2 minutes. Efficiency = 10 holes per hour. The machine is driven by ГАЗ-ММ internal combustion engine, the weight of the machine being 400 kg. It is constructed to allow for vertical drilling as well as drilling at an angle of up to 25°. The base is formed by a horizontal base on wheels to which a vertical guiding frame is attached. The combustion engine operates the drill through transmission. The drill is moved by an automatic arrangement but manual operation is also possible. A 12-fold increased efficiency is achieved with this drill. There is 1 photograph.

1/1

AVAILABLE:

L 06424-67 EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AT6024282 SOURCE CODE: UR/2976/66/000/005/0088/0102

18
B+1

AUTHOR: Shan'gin, V. F.; Shatalov, Yu. A.

ORG: none

TITLE: Displacement-to-number converter 16 using coarse optical gratings

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Vychislitel'naya tekhnika, no. 5, 1966, 88-102

TOPIC TAGS: optic grating, diffraction grating, spectrometer

ABSTRACT: Principles and methods of precision incremental measurement of linear distances or displacements, using coarse optical gratings to generate moire fringes are described. Moire fringes are usually produced by superimposing two transparent, relatively coarse gratings, such that the line pattern on one forms a small angle with respect to the line pattern on the other. If one grating is stationary and the other one is moved, the moire fringes will appear to move in the direction normal to the movement of the grating. The distance between the centers of two adjacent moire fringes is given by

$$W = \frac{w_1 w_2}{c} = \frac{w_1 w_2}{\sqrt{w_1^2 + w_2^2 - 2w_1 w_2 \cos\theta}}.$$

Card 1/3

L 06624-67
ACC NR: AT6024282

nals representing the instantaneous fringe position and the direction of the motion, and to generate pulses on one of the two output terminals for every increment of displacement. Each of the two output terminals corresponds to one direction of the motion. The pulses are fed into a bidirectional counter where their algebraic sum, representing the instantaneous value of the displacement, is displayed. An experimental model was evaluated and found to be capable of resolving distances to $1/128$ of the pitch. Diagrams of optical patterns, phase relations of the electrical signals, and block diagrams of the electronics are included. Orig. art. has: 10 figures, 22 formulas.

SUB CODE: 20,09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 3/3

SHMIDT, V. A.

SHMIDT, V. A.- "Analysis of Automatic-Regulation Schemes for Internal Combustion Locomotives." Min of Transport Means USSR, Leningrad Order of Lenin Inst of Engineers of Railway Transport imeni Academician V. N. Obraztsov, Leningrad, 195 (Dissertations for Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

SHANGIN, Yuriy Aleksandrovich, inzhener; GROMOV, S.A., redaktor; KHITROV, P.A., tekhnicheskiy redaktor.

[Diesel locomotive with a rotary amplifier] Teplovoz s elektromashinnym usilitelem. Moskva, Gos.transp.zhel-dor. izd-vo, 1956. 25 p. (MLRA 9:6)
(Diesel locomotives) (Rotating amplifiers)

SOV/112-59-3-5109

32(3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 116 (USSR)

AUTHOR: Shangin, Yu. A.

TITLE: Automatic Acceleration of the Diesel-Electric Locomotive (Avtomaticheskiy pusk (razgon) teplovoza)

PERIODICAL: Sb.: Leningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 74-82

ABSTRACT: During the acceleration period, it is desirable that a constant acceleration be ensured independently of the power variation of the diesel. This can be attained by automating the acceleration process. As a result, train breaks may be forestalled, locomotive-wheel spinning may be eliminated, and smooth acceleration may be achieved. The possibility of developing an automatic-acceleration scheme is explored. It is known that to obtain a constant acceleration, the generator current must be maintained constant. It is pointed out that in this case the power N of the diesel should vary according to the law $N = \sqrt{A + BV}$, where A and B are constants, V is the train speed.

Card 1/2

PODVYAZKIN, K.A., kand.tekhn.nauk; SHANGIN, Yu.A., kand.tekhn.nauk;
BAUMAN, V.E., kand.tekhn.nauk; POVARENKOV, S.D., dots. (Leningrad)

"Problems in the developments of railroad transportation;
collection of articles." Reviewed by K.A.Podviazkin and others.
Zhel.dor.transp. 40 no.4:93-95 Ap '58. (MIRA 13:4)
(Railroads)

SHANGIN, Yu.A., kand.tekhn.nauk

Effect of longitudinal reaction of rotating amplifier armatures on the operational stability of the electric transmission system of diesel locomotives. Sbor.LIIZHT no.159:198-206 '58. (MIRA 12:2)

(Diesel locomotives--Electric equipment) (Rotating amplifiers)

SHANGIN, Yu.A., assistent

System for automatically starting a train with speed regulation according to time. Trudy LIIZHT no.175:53-55 '61. (MIRA 15:12)
(Railroads--Rolling stock)

SHANGIN-BEREZOVSKIY, G.N.

Remote hybridization in strawberries. Trudy Inst. gen. no.30:321-356 '63. (MIRA 17:1)

SHANGIN-BEREZOVSKIY, G.N.

Methods of quantitative analysis of the changes following the action of ionizing radiation. Izv. AN SSSR. Ser. biol. no.6:852-860 N-D '64. (MIRA 17:11)

1. Institute of Genetics, Academy of Sciences of the U.S.S.R., Moscow.

NUZHDIN, N.I.; SHAMGIN-BEREZOVSKIY, G.N.; PASTUSHENKO-STRELETS, N.A.

Change in the radiosensitivity of barley under changing life conditions. Trudy Inst. gen. no.31:55-79 '64. (MIRA 17:9)

SHANGIN-BEREZOVSKIY, G.

Setting of strawberry seeds on berries of different orders. Trudy Inst. gen. no.31:182-194 '64.

Amphidiploid strawberry in the light of the problem of species. Ibid.:388-395

Possibility for a prolonged preservation of vitality in strawberry pollens. Ibid.:396-399 (MIRA 17:7)

L 3952-66

ACC NR: AT5024242 SOURCE CODE: UR/2670/65/000/032/0018/0068

AUTHOR: Nuzhdin, N. I. (Corresponding member AN SSSR); Pastushenko-Strelets, N. A.; Shangin-Berezovskiy, G. N.

18
B+1

ORG: Institute of Genetics, AN SSSR (Institut genetiki AN SSSR)

TITLE: The effect of ecological cultivation conditions and the physiological condition of seeds (degree of maturity) on radiosensitivity and the frequency and character of hereditary changes in gamma-irradiated barley

SOURCE: AN SSSR. Institut genetiki. Trudy, no. 32, 1965. Deystviye ioniziruyushchikh izlucheniy na rastitel'nyy i zhivotnyy organizmy (Effect of ionizing radiation on plant and animal organisms), 18-68

TOPIC TAGS: plant genetics, biologic mutation, heredity, plant physiology, radiation plant effect, plant ecology

ABSTRACT: Experiments were conducted to determine the effect of different ecological conditions on the sensitivity to irradiation of gamma-irradiated barley seeds. The dose of gamma rays varied but did not exceed 12 krad. Experimental and control seeds were sown in Moscow, Estonia, Khibiny, Odessa, Kharkov, Leninavan, Kedabek, Kelbedzhar, and Pamir. Results showed a definite relationship between the radiosensitivity of plants grown from irradiated seeds and their ecological cultivation conditions. Furthermore, the cultivation conditions for plants of the generation preceding ir-

Card 1/3 UDC: 577.391

L 3752-06

ACC NR: AT5024242

0

radiation significantly influenced the radiosensitivity of seeds collected from them and sown under identical conditions. It is known that seeds of the same variety, irradiated at a different degree of maturity, have different radiosensitivity. It has also been established that different ecological conditions influence the variability of quantitative plant characteristics (such as height of the culm and length of the spike) differently in the first generation of barley grown from irradiated seeds. Important differences in these indices are also observed between control plants of the same variety grown under different conditions. Experiments showed that the influence of conditions of cultivation prior to irradiation on the variability of these quantitative indices is manifested fairly clearly and is retained in the second generation. Another part of this series of experiments showed that the number and character of structural changes in barley during irradiation frequently depends on the ecological conditions in which the plants grew prior to and after irradiation. The variability of quantitative and morphological features observed in the first generation of plants is a function of the different maturation phase of the seeds from which they grew. Structural changes in the barley spike are the result of irradiation. Thus, it was determined that the character of structural changes is connected with the maturation phase of irradiated seeds. The frequency and character of lethal chlorophyll mutations in the second generation of gamma-irradiated barley clearly depends on the cultivation conditions of the first generation. It was shown that cultivation conditions of the mother plants prior to irradiation have an essential influence on the frequency of appearance and character of lethal chlorophyll mutations in the second generation. Again, the frequency of appearance of chlorophyll mutations

Card 2/3

L 3952-66

ACC NR: AT5024242

in the second generation of gamma-irradiated barley depends on the maturation phase of irradiated seeds. Viable mutations during gamma irradiation of barley are few, and thus no rule for their occurrence can be established. However, it must be noted that visible mutations occur most frequently when plants are cultivated prior to irradiation or afterwards under unnatural conditions. Orig. art. has: 15 figures and 43 tables. [JS]

SUB CODE: LS/ SUBM DATE: none / ORIG REF: 047/ OTH REF: 046/

Card 3/3 DP